
9 Emergency Management Considerations

Disaster preparedness is crucial to quick and effective responses to emergency situations. Potential owners and managers of tornado and hurricane shelters should be ready and able to open a shelter for immediate use in response to an extreme-wind event. The best way to accomplish this is to create a Shelter Operations Plan tailored to the needs of the intended users of the shelter. To help emergency managers and shelter owners and operators prepare Shelter Operations Plans, this chapter presents two types of plans in outline form: a Community Shelter Operations Plan with an accompanying Shelter Maintenance Plan in Sections 9.1 and 9.2, respectively, and a Commercial Building Shelter Operations Plan in Section 9.3. These plans should be considered as baseline plans that present the minimum information that should be contained within Shelter Operations Plans.

9.1 Community Shelter Operations Plan

Each shelter designed according to the guidance in this manual should have a Shelter Operations Plan. The plan should describe the difference between tornado watches and warnings, and hurricane watches and warnings, and clearly define the actions to be taken for each type of forecast. A Community Shelter Management Team composed of members committed to performing various duties should be designated. The following is a list of action items for the Community Shelter Operations Plan:

- The names and all contact information for the coordinators/managers detailed in Sections 9.1.1 through 9.1.7 should be presented in the beginning of the plan.
- A tornado or hurricane watch is issued by the National Weather Service (NWS) when a tornado or a hurricane is possible in a given area. When a watch is issued, the Community Shelter Management Team is on alert.
- A tornado or hurricane warning is issued when a tornado or hurricane has been sighted or indicated by weather radar. When a warning is issued, the Community Shelter Management Team is activated and begins performing the following tasks:
 - sending the warning signal to the community, alerting them to go to the shelter

- evacuating the community residents from their homes and to the shelter
- taking a head count in the shelter
- securing the shelter
- monitoring the storm from within the shelter
- after the storm is over, determining when conditions warrant allowing shelter occupants to leave and return to their homes
- after the storm is over, cleaning the shelter and restocking emergency supplies

A member of the Community Shelter Management Team can take on multiple assignments or roles as long as all assigned tasks can be performed effectively by the team member before and during a high-wind event.

The following team members would be responsible for overseeing the Community Shelter Operations Plan:

- Site Coordinator
- Assistant Site Coordinator
- Equipment Manager
- Signage Manager
- Notification Manager
- Field Manager
- Assistant Managers

Full contact information (i.e., home and work telephone, cell phone, and pager numbers) should be provided for all team members and their designated backups. The responsibilities of each of these team members are detailed in Sections 9.1.1 through 9.1.7. Suggested equipment and supplies for shelters are listed in Section 9.1.8 and Table 9.1. Appendix C includes an example of a Community Shelter Operations Plan.

9.1.1 Site Coordinator

The Site Coordinator's responsibilities include the following:

- organizing and coordinating the Community Shelter Operations Plan
- ensuring that personnel are in place to facilitate the Community Shelter Operations Plan

- ensuring that all aspects of the Community Shelter Operations Plan are implemented
- developing community education and training programs
- setting up first-aid teams
- coordinating shelter evacuation practice drills and determining how many should be conducted in order to be ready for a real event
- conducting regular community meetings to discuss emergency planning
- preparing and distributing newsletters to area residents
- distributing phone numbers of key personnel to area residents
- ensuring that the Community Shelter Operations Plan is periodically reviewed and updated as necessary

9.1.2 Assistant Site Coordinator

The Assistant Site Coordinator's responsibilities include the following:

- performing duties of the Site Coordinator when he/she is off site or unable to carry out his/her responsibilities
- performing duties as assigned by the Site Coordinator

9.1.3 Equipment Manager

The Equipment Manager's responsibilities include the following:

- understanding and operating all shelter equipment (including communications, lighting, and safety equipment, and closures for shelter openings)
- maintaining and updating, as necessary, the Shelter Maintenance Plan (see Section 9.2)
- maintaining equipment or ensuring that equipment is maintained year-round, and ensuring that it will work properly during a high-wind event
- informing the Site Coordinator if equipment is defective or needs to be upgraded
- purchasing supplies, maintaining storage, keeping inventory, and replacing outdated supplies
- replenishing supplies to pre-established levels following shelter usage

9.1.4 Signage Manager

The Signage Manager's responsibilities include the following:

- determining what signage and maps are needed to help intended shelter occupants get to the shelter in the fastest and safest manner possible
- preparing or acquiring placards to be posted along routes to the shelter throughout the community that direct intended occupants to the shelter
- ensuring that signage complies with ADA requirements (including those for the blind)
- providing signage in other languages as appropriate for the intended shelter occupants
- working with the Equipment Manager to ensure that signage is illuminated or luminescent after dark and that all lighting will operate if a power outage occurs
- periodically checking signage for theft, defacement, or deterioration and repairing or replacing signs as necessary
- providing signage that clearly identifies all restrictions that apply to those seeking refuge in the shelter (e.g., no pets, limits on personal belongings)

9.1.5 Notification Manager

The Field Manager's responsibilities include the following:

- developing a notification warning system that lets intended shelter occupants know they should proceed immediately to the shelter
- implementing the notification system when a tornado or hurricane warning is issued
- ensuring that non-English-speaking shelter occupants understand the notification (this may require communication in other languages or the use of prerecorded tapes)
- ensuring that shelter occupants who are deaf receive notification (this may require sign language, installation of flashing lights, or handwritten notes)
- ensuring that shelter occupants with special needs receive notification in an acceptable manner

9.1.6 Field Manager

The Field Manager's responsibilities include the following:

- ensuring that shelter occupants enter the shelter in an orderly fashion
- pre-identifying shelter occupants with special needs such as those who are disabled or who have serious medical problems
- arranging assistance for those shelter occupants who need help getting to the shelter (all complications should be anticipated and managed prior to the event)
- administering and overseeing first-aid by those trained in it
- providing information to shelter occupants during a high-wind event
- determining when it is safe to leave the shelter after a high-wind event

9.1.7 Assistant Managers

Additional persons should be designated to serve as backups to the Site Coordinator, Assistant Site Coordinator, Equipment Manager, Signage Manager, Notification Manager, and Field Manager when they are off site or unable to carry out their responsibilities.

9.1.8 Equipment and Supplies

Shelters designed and constructed to the criteria in this manual are intended to provide safe refuge from an extreme-wind event. These shelters serve a different function from shelters designed for use as long-term recovery shelters after an event; however, shelter managers may elect to provide supplies that increase the comfort level within the short-term shelters. Table 9.1 lists suggested equipment and supplies for community shelters.

9.2 Shelter Maintenance Plan

Each shelter should have a maintenance plan that includes the following:

- an inventory checklist of the emergency supplies (see Table 9.1)
- information concerning the availability of emergency generators to be used to provide power for lighting and ventilation
- a schedule of regular maintenance of the shelter to be performed by a designated party

Such plans will help to ensure that the shelter equipment and supplies are fully functional during and after tornadoes and hurricanes. The Shelter Maintenance Plan should be included as part of a Community, Commercial, or other Shelter Operations Plan.

Table 9.1 Shelter Equipment and Supplies

TYPE	EQUIPMENT/SUPPLIES
Communications Equipment	NOAA weather radios or receivers for commercial radio broadcasts if NOAA broadcasts are not available
	ham radios or emergency radios connected to the police or the fire and rescue systems
	cellular telephones (may not operate during a storm event and may require a signal amplifier to be able to transmit from within the shelter)
	battery-powered radio transmitters or signal emitting devices that can signal local emergency personnel
	portable generators with uninterrupted power supply (UPS) systems and vented exhaust systems
	portable computers with modem and internet capabilities
Emergency Equipment	public address systems
	a minimum of two copies of the Community Shelter Operations Plan
	flashlights and batteries
	fire extinguishers
	blankets
	pry-bars (for opening doors that may have been damaged or blocked by debris)
	trash receptacles
	trash can liners and ties
	tool kits
First-Aid Supplies	heaters
	adhesive tape and bandages in assorted sizes
	safety pins in assorted sizes
	latex gloves
	scissors and tweezers
	antiseptic solutions
	antibiotic ointments
	moistened towelettes
	non-prescription drugs (e.g., aspirin and non-aspirin pain relievers, anti-diarrhea medications, antacids, syrup of Ipecac, laxatives)
	smelling salts for fainting spells
	petroleum jelly
	eye drops
	wooden splints
	thermometers
	towels
	foldup cots
	first-aid handbooks
Water	adequate quantities for the duration of the particular storm
Sanitary Supplies	toilet paper
	moistened towelettes
	paper towels
	personal hygiene items
	disinfectants
	chlorine bleach
	plastic bags
	portable chemical toilet(s), when regular toilets are not contained in the shelter
Infant and Children Supplies (As Necessary)	disposable diapers
	powders and ointments
	moistened towelettes
	pacifiers
	blankets

9.3 Commercial Building Shelter Operations Plan

A shelter designed to the criteria of this manual may be used by a group other than a residential community (e.g., the shelter may have been provided by a commercial business for its workers or by a school for its students). Guidance for preparing a Commercial Building Shelter Operations Plan is presented in this section.

9.3.1 Emergency Assignments

It is important to have personnel assigned to various tasks and responsibilities for emergency situations before they occur. An Emergency Committee, consisting of a Site Emergency Coordinator, a Safety Manager, and an Emergency Security Coordinator (and backups), should be formed, and additional personnel should be assigned to serve on the committee.

The Site Emergency Coordinator's responsibilities include the following:

- maintaining a current Shelter Operations Plan
- overseeing the activation of the Shelter Operations Plan
- providing signage
- notifying local authorities
- implementing emergency procedures
- as necessary, providing for emergency housing and feeding needs of personnel isolated at the site because of an emergency situation
- maintaining a log of events

The Safety Manager's responsibilities include the following:

- ensuring that all personnel are thoroughly familiar with the Shelter Operations Plan
- conducting training programs that include the following, at a minimum:
 - the various warning signals used, what they mean, and what responses are required
 - what to do in an emergency (e.g., where to report)
 - the identification, location, and use of common emergency equipment (e.g., fire extinguishers)
 - shutdown and startup procedures
 - evacuation and sheltering procedures (e.g., routes, locations of safe areas)

- conducting drills and exercises (at a minimum, twice annually) to evaluate the Shelter Operations Plan and to test the capability of the emergency procedures
- ensuring that employees with special needs have been consulted about their specific limitations and then determining how best to provide them with assistance during an emergency (FEMA's United States Fire Administration publication *Emergency Procedures for Employees with Disabilities in Office Occupancies* is an excellent source of information on this topic)
- conducting an evaluation after a drill, exercise, or actual occurrence of an emergency situation, in order to determine the adequacy and effectiveness of the Shelter Operations Plan and the appropriateness of the response by the site emergency personnel

The Emergency Security Coordinator's responsibilities include the following:

- opening the shelter for occupancy
- controlling the movement of people and vehicles at the site and maintaining access lanes for emergency vehicles and personnel
- "locking down" the shelter
- assisting with the care and handling of injured persons
- preventing unauthorized entry into hazardous or secured areas
- assisting with fire suppression, if necessary

The Emergency Committee's responsibilities include the following:

- informing employees in their assigned areas when to shut down work or equipment and evacuate the area
- accounting for all employees in their assigned areas
- turning off all equipment

9.3.2 Emergency Call List

A Shelter Operations Plan for a commercial building should include a list of all current emergency contact numbers. A copy of the list should be kept in the designated shelter area. The following is a suggested list of what agencies/numbers should be included:

- office emergency management contacts for the building
- local fire department—both emergency and non-emergency numbers
- local police department—both emergency and non-emergency numbers

- local ambulance
- local emergency utilities (e.g., gas, electric, water, telephone)
- emergency contractors (e.g., electrical, mechanical, plumbing, fire alarm and sprinkler service, window replacement, temporary emergency windows, general building repairs)
- any regional office services pertinent to the company or companies occupying the building (e.g., catastrophe preparedness unit, company cars, communications, mail center, maintenance, records management, purchasing/supply, data processing)
- local services (e.g., cleaning, grounds maintenance, waste disposal, vending machines, snow removal, post office, postage equipment, copy machine repair, elevator music supplier)

9.3.3 Tornado/Hurricane Procedures for Safety of Employees

The following procedures should be followed in the event of a tornado or a hurricane:

- The person first aware of the onset of severe weather should notify the switchboard operator or receptionist, or management immediately.
- If the switchboard operator or receptionist is notified, he or she should notify management immediately.
- Radios or televisions should be tuned to a local news or weather station, and the weather conditions should be monitored closely.
- If conditions worsen or otherwise warrant, management should notify the employees to proceed to and assemble in a designated safe area(s). A suggested announcement would be “The area is experiencing severe weather conditions. Please proceed immediately to the designated safe area and stay away from all windows.”
- Employees should sit on the floor in the designated safe area(s) and remain there until the Site Emergency Coordinator announces that conditions are safe for returning to work.

9.4 Signage

The Community or Commercial Shelter Management Plan should summarize all activities and strongly encourage community involvement. Area shelter occupants should be given a list of all key personnel and associated contact information. The plan should also describe the type of signage occupants are to follow to reach the shelter. The signs should be illuminated, luminescent, and obvious.

9.4.1 Community Signage

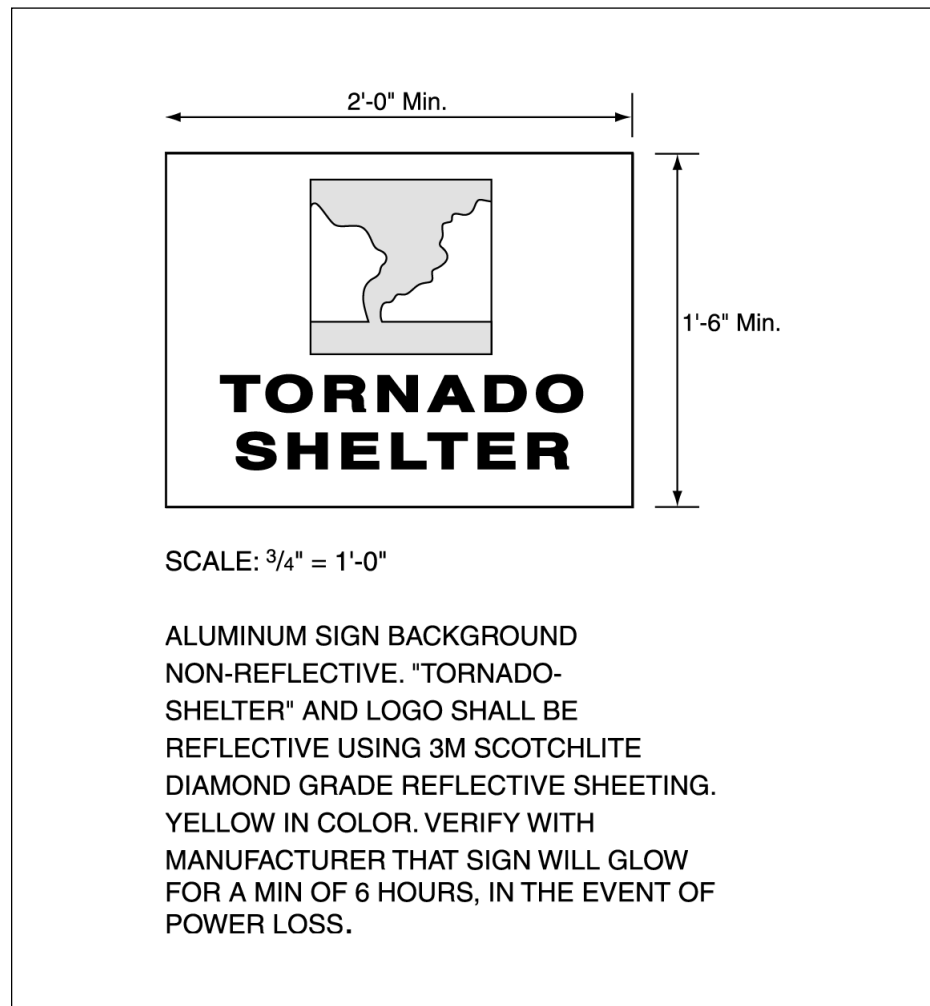
It is very important that shelter occupants can reach the shelter quickly and without chaos. Parking is often a problem at community shelters; therefore, a Community Shelter Operations Plan should instruct occupants to proceed to a shelter on foot if time permits. Main pathways should be determined and laid out for the community. Pathways should be marked to direct users to the shelter. Finally, the exterior of the shelter should have a sign that clearly identifies the building as a shelter.

9.4.2 Building Signage at Schools and Places of Work

Signage for shelters at schools and places of work should be clearly posted and should direct occupants through the building or from building to building. If the shelter is in a government-funded or public-funded facility, a placard should be placed on the outside of the building designating it an emergency shelter (see Figure 9-1). It is recommended that signage be posted on the outside of all other types of shelters as well.

Figure 9-1

Example of a wind shelter sign (see Detail 201, Sheet A2, Schedules and Details, in the plans titled *Community Shelter, Hurricane Floyd Housing Initiative, North Carolina*—see Appendix C of this manual).



It is important to note, however, that once a public building has been identified as a tornado or hurricane shelter, people who live or work in the area around the shelter will expect the shelter to be open during an event. Shelter owners should be aware of this and make it clear that the times when a shelter will be open may be limited. For example, a shelter in an elementary school or commercial building may not be accessible at night.